

F Canyon

F Canyon is located in F Area, one of two chemical separations areas at SRS. Historically, F Canyon operations recovered plutonium-239 (Pu-239) and uranium-238 (U-238) by a chemical separation process after dissolving aluminum-based irradiated fuel slugs or rods from the site's production reactors and other test and research reactors.

Pu-239 was produced to support the nuclear weapons stockpile. Depleted U-238, in an oxide (solid) form, was recovered as a by-product and remains stored at SRS. No new production of plutonium is needed because of the reduction in the nation's nuclear weapons stockpile.

In February 1995, the Department of Energy decided to resume chemical separation operations in F Canyon to stabilize and manage most of the remaining inventory of plutonium-bearing materials at SRS. Most of the stabilization actions were essentially the same as historic operations. Stabilization of remaining identified legacy was completed in March 2002.

DOE has committed that plutonium-239 from stabilization actions will not be used for nuclear weapons purposes.

Currently, suspension activities are under way, including flushing of canyon vessels and piping, decontaminating solvent and consolidating depleted uranium solutions for future shipments out of F Canyon, pending a final decision on the facility's utilization. These suspension activities will significantly reduce or eliminate hazards associated with F Canyon processes and will prepare the facility for accelerated deactivation. Accelerated deactivation of the facility will result in up to a 90% reduction in operating costs and potentially save taxpayers \$250 million over the next 10 years.

F Canyon was constructed in the early 1950s and began operations in 1954. The building is called a canyon because of its long, narrow shape. It is 835 feet long, 122 feet wide and 66 feet high. All work in the canyon is remotely controlled, and employees are further protected from radiation by thick concrete walls. Equipment and piping are maintained using overhead bridge cranes.

During separations operations, nuclear materials were directly fed to the dissolvers. Plutonium and uranium were separated and transferred to various processing sections to remove contaminants and purify the products. Waste products were separated and transferred to the site's high-level waste storage tanks for eventual vitrification in the Defense Waste Processing Facility.